CHAPTER VIII: LOUISVILLE CANAL AND DISTRICT, 1860-1900

Captain Henry M. Shreve and Colonel Stephen H. Long managed western river improvements from offices at Louisville for many years before the Civil War, but the history proper of the Louisville Engineer District actually began on May 11, 1867, when an Engineer officer was ordered to Louisville to direct completion of an enlarged canal around the Falls of the Ohio. The authority of this officer and his successors was gradually extended to the Lower Ohio River and tributary streams; and it became the custom to refer to the geographic area of responsibility of this officer and his staff as a "district." After 1888 it became officially the Louisville Engineer District.

The history of the formation and early development of the Louisville Engineer District is of special interest, encompassing several complex developments including final federal assumption of control of the Louisville and Portland Canal, the freeing of Ohio River commerce from tolls, and an extended struggle to free Louisville canal operations of political influences. Many vigorous, colorful officers served as District Engineer during the formulative years of the Louisville District, and their utmost ingenuity was required to deal with the complicated engineering and political problems confronting them.

Canal Enlargement, 1860-1866

It will be recalled that Congress authorized the Louisville and Portland Canal Company to borrow funds necessary to enlarge the canal on May 4, 1860, but, though the United States owned all but five shares of company stock, Congress was not prepared to assume any responsibility for the work. A convention of steamboat interests had met at Louisville in 1859, and at that convention Theodore R. Scowden, a hydraulic engineer who constructed water supply systems for Cincinnati and Cleveland, Ohio, and Louisville and Newport, Kentucky, presented a plan for enlargement of the canal and construction of additional locks that was endorsed by the convention. The canal corporation sold bonds to finance the project, employed Theodore Scowden as engineer, and initiated construction.[1]

Plans called for a ninety-foot wide canal, with two basins to permit boats to pass, and construction of the largest lock in the world at the time — a two-flight lock with a total lift of 26 feet and each chamber 80 feet wide and 350 feet long. The new lock was laid out in a new branch of the canal excavated from the head of the old lock in a southerly direction to enter the river a few hundred feet below the outlet of the old canal. The cornerstone of the new lock was laid on April 2, 1862; stone for the masonry was quarried 120 miles down river and transported to the site. The last stone in the massive masonry lock walls was set in place on October 18, 1865, after three-years construction, and canal excavation was about seventy-five percent completed by that date. An iron swing-bridge across the lock was completed; timber and iron for the lock-gates were stored in a warehouse ready for assembly. But, after an expenditure of $1,825,000, the project was suspended because the inflationary economy of the war had so increased the costs of labor and materials that the company simply did not have the financial reserves necessary to complete it.[2]

Shipping interests of the Upper Ohio Valley were outraged by the delays of

construction and suspension of the project. A delegation from Cincinnati was reported as saying: "And now the question recurs with awful significance, how are we going to get past Louisville? There are no balloons that we know of. There is no money in Kentucky that we ever heard of. If we don't finish that canal in some way, we may as well return to wheelbarrows." Perhaps a Congressman from Cincinnati best expressed the prevailing sentiment on the subject of the canal in the postwar years:

> Slavery is now abolished, the war is over, and considerations of patriotism and interest alike demand that we should address ourselves to the task of repairing the losses incurred and building up the places made desolate by the ravages of war. To that end we should encourage every work which tends to make communications between the two great sections of the country, lately estranged, free, and safe. Improve this canal, then, and make it free to the commerce of the valleys of the Ohio and Mississippi. Commerce is the great civilizer, it is the great agency of peace and prosperity.[3]

Government Surveys, 1866-1868

W. Milnor Roberts inspected the Louisville canal during his preliminary examination of the Ohio River in 1866. He estimated that, though lock masonry was completed, the enlargement project would cost another million dollars to complete. He declared, however, that speedy completion of the project was vital to Ohio and Mississippi valley commercial interests and recommended that the United States "take this important work in hand and complete it at the earliest period possible, under some arrangement that would be satisfactory to all parties concerned."[4]

Congress responded to this recommendation and to general public concern with a provision in the Rivers and Harbors Act of March 29, 1867, for a survey of a canal route on the Indiana bank and comparison of its costs with those of completing the Louisville canal. The Chief of Engineers collected previous survey reports of Thomas Cram, 1844, Stephen H. Long, 1849, and the Board of Engineers, 1853, delivered them to Major General Godfrey Weitzel, and ordered him, on May 11, 1867, to Louisville to complete the authorized survey.[5]

General Weitzel was a Cincinnati Rhinelander, born in Germany and characterized by an almost brutal honesty. Before the Civil War he constructed fortifications for the Engineers, and during the war took a commission in the volunteer army, rising to the command of a corps of the Army of the James. General Weitzel and his command had the honor of being the first Union forces in Richmond in April, 1865; and General Weitzel had taken President Lincoln on his famous tour of the home of Jefferson Davis and Libby Prison while Richmond was still aflame. After the war, Weitzel served on the Texas border with the troops who served notice of eviction on the French in Mexico, and then returned to the Corps of Engineers, reverting to his regular rank of Major, though he was ever afterwards addressed by his volunteer rank.[6]

The political sensitivity of Congress and the Chief of Engineers in handling the controversial Falls of the Ohio project should be recognized. Congress authorized *first* a survey of a canal route on the Indiana bank — considerable public support for such a project still existed in 1867 — and then comparison of its costs with those of completing the Louisville canal. And the Chief of Engineers appointed a famous *Cincinnatian* to direct the survey of the canal at Louisville and report its results.

General Weitzel traveled to Louisville, employed assistant engineers, surveyors,

and a chief draftsman named Colonel Philip J. Schopp. In July, 1867, Weitzel instructed his staff to survey first the proposed Indiana canal, then the riverbed of the Falls, and finally the Louisville canal. He traveled to a river convention at Cincinnati in October, solicited the opinions of the delegates on the Falls project, and took a vote on the best dimensions for locks at the new canal. The convention voted for locks 400 feet long and 110 feet wide, if a canal were constructed on the Indiana bank, but it recommended that the new two-flight lock at the Louisville canal, with chambers 350 by 80 feet, be first completed.[7]

At completion of surveys in 1868, General Weitzel submitted an elaborate report to Congress, stating it was his "positive conviction" that the entire Ohio River would eventually be improved and chiding Congress for neglecting the improvement of an "insurmountable obstruction," the Falls, across a national highway. "It was clearly the duty of the government to remove this obstruction," he said, "as it did and does almost everywhere else on the Atlantic coast and northern lakes; but instead of doing this duty, it became a stockholder, and made money in a company chartered by the State of Kentucky, which levied an onerous and unjust tax on the commerce of the country."[8]

General Weitzel estimated that, because of the limited size of the existing canal at the Falls, the United States had paid for transshipment of government freight around the Falls during the war a sum which would easily have paid for an entirely new canal. He had received the assurance of the canal directors that they would gladly sell their five shares at a hundred dollars per share and surrender all rights to the canal to the United States, providing the United States would also assume responsibility for payment of all bonds and debts of the company. General Weitzel recommended that Congress accept this offer, complete the Louisville canal, and also construct a second canal on the Indiana bank to accommodate growing river traffic.[9]

Completion of the Enlarged Canal, 1869-1872

Congress avoided the issue of control of the Louisville canal, but on July 25, 1868, appropriated $450,000 "toward completing the Louisville and Portland canal, in accordance with the plans and estimates made in the report of General Godfrey Weitzel." General Weitzel employed assistant engineers and a work force and launched a project to complete excavation of the canal, build masonry walls along the canal slope, assemble and install lock gates, install miter sills on the bottom of the lock chambers for the gates to lap against in closed position, and construct a guide wall (apron dam) at the head of the canal to facilitate the safe entrance of watercraft.[10]

Construction was delayed by frequent strikes by the workmen and by irregular appropriations — General Weitzel commented that had funds been provided in a more business-like manner the work could have beem completed for $100,000 less — but was otherwise free of incident until the date it was to open to traffic. At 7:30 p. m., November 22, 1871, the last rock was excavated from the canal; and at 8:00 a. m., November 23, traffic began to enter the new branch. But suddenly the miter-sills gave way and the lock-gates began to break loose from the walls under the strain. Weitzel closed the canal and labored three days and nights throwing a temporary cofferdam across the canal. Weitzel later explained that on the day be-

(Photo courtesy of the Cincinnati Historical Society)

MAJOR GENERAL GODFREY WEITZEL

fore opening the canal he inspected the gates and found the timber cushions along the miter sills lacked an inch of meeting and sealing the bottom of the gates. He directed the contractor to replace the timber cushions and it was done with lumber from the warehouse which had been stored for eight years. The General concluded that after water entered the lock the seasoned lumber in the cushions became saturated, expanded, and the resultant stress forced the miter sills out of position. He lamented to the Chief of Engineers:

> I wrote to Mr. Milnor Roberts, and he sent me two assistants of experience, and I have read every work I could reach on the subject of locks, even sending to Europe for two works, at a large expense. But the trouble is that no locks were probably ever built, where the gates are put together eight years after all their parts are framed, and all this assistance and information, to me thus gained, was of no practical value in this instance.[11]

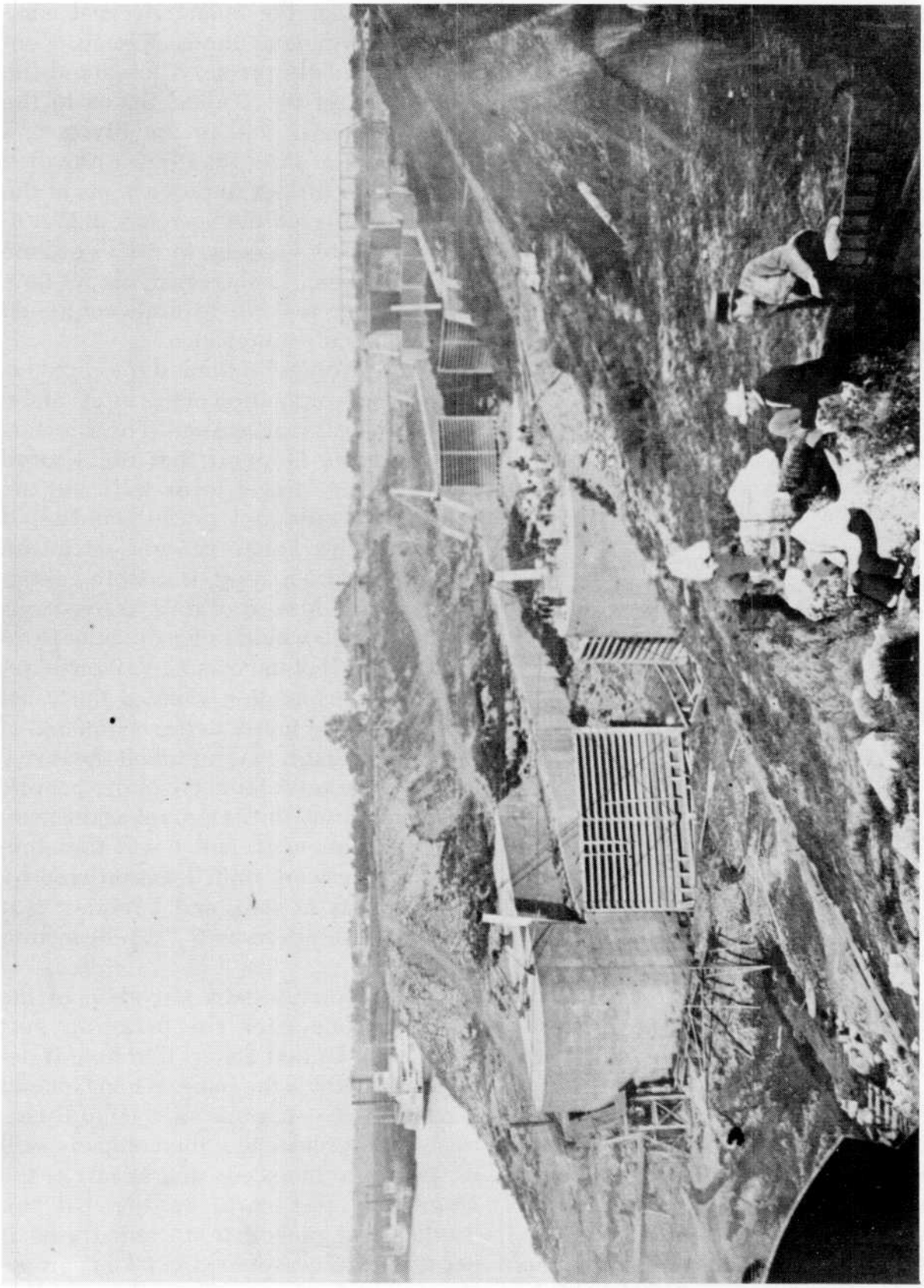
Two-inch bolts to anchor the sills to the rock foundation were installed; calking was added between the timber cushions and stone miter-sills; additional braces and "hog-chains" were installed to strengthen the huge lock-gates; and on February 26, 1872, the steamboat *Mollie Ebert,* followed by the *E. H. Durfee, Esperanza,* and *Potomac* locked through. The *Courier-Journal* reported that Louisvillians rejoiced at the opening of the enlarged canal and locks and fully supported the removal of tolls for its use at an early date.[12]

Freeing the Canal, 1872-1880

In 42 years, 1831-1872, the Louisville and Portland Canal Company collected tolls substantially in excess of five million dollars. Receipts were $180,925,40 in 1866, (the highest amount collected on the old canal and lock), were $159,838.90 in 1871, and increased to $207,025.19 in 1872, the year the enlarged canal completed with federal funds opened. Congress was finally prepared to extend the jurisdiction of the United States to the Louisville canal, and in the Rivers and Harbors Act of June 10, 1872, it provided $300,000 for further improvements at the canal and directed the Secretary of War to report the steps necessary to free Ohio River commerce at the canal, except for a five-cent per ton toll to fund continued operation and maintenance.[13]

General Weitzel informed the directors of the canal corporation of the terms of the act, but a legal snarl ensued. The directors informed the General that the United States had no power to fix tolls and the company would not permit continued work on the canal project with the $300,000 appropriation, if it were contingent upon reduction of tolls to five-cents per ton, which would be insufficient to retire the bonds of the company. Weitzel replied that suspending work at the canal would do great injury to the commerce of the United States and informed the directors: "As the representative of the people, I consider it my duty to guard against any such consequences, and I will therefore carry on the work until I am ordered by my superiors to stop; and I request that you do not interfere until I can hear from them."[14]

The corporation was uncertain of the proper procedures for bringing suit against the United States; therefore it determined to force the issue. When General Weitzel renewed work on a landfill section at the project site, the company sent its dredge to the scene and as fast as the Engineers put earth in the fill the dredge-boat picked it up and threw it back. Weitzel was forced to take court action to obtain the privilege of expending



Louisville and Portland Canal—New locks under construction, 1871 (Record group 77, National Archives)

the $300,000 appropriation for the canal. Rivermen and commercial interests were outraged by the delay at the project, for their boats and freight ran daily risks in passing the canal. One letter, for instance, in the *Courier-Journal* contended:

> The principal source of difficulty between Gen. Weitzel and the Canal Company consists in this: that the latter look at the matter entirely from the technical stand-point of the lawyer, and for the time being have abdicated the use of their common sense. As for lawyers, they nearly always make matters worse. What with their subtleties, their quibbling, hair-splitting constructions, their fanatical regard for formulas, and their love for time-consuming processes, everything goes slow, and wrong, and injuriously the moment you have to place it in a lawyer's hand.[15]

But, to the credit of government attorneys and counsel for the company, in this instance action was swift. The case was taken immediately before a Justice of the Supreme Court of the United States, who granted an injunction against further interference by the company with the project and declared that the United States could not fix the amount of tolls until it had full control of the canal. Congress directed on March 3, 1873, that the Secretary of Treasury purchase the remaining stock of the company in private hands, assume full control of the canal for the United States, and reduce tolls immediately to twenty-five cents per ton. But the directors still refused to surrender the company charter till Congress legally asumed responsibility for the bonds and debts of the company. Congress assumed this obligation on May 11, 1874; and on June 10, 1874, at midnight, the United States took over the Louisville and Portland Canal. Shortly thereafter a boat passed through at reduced toll-rates, thus accomplishing, said General Weitzel, "a thing which the people of the West have been endeavoring to effect during the last thirty-four years."[16]

As the Engineer staff at the canal improved the efficiency of canal operation and maintenance, tolls were further reduced, but in 1880 a nominal toll was still being collected. The House Committee on Railways and Canals reported a bill in 1880 to remove all tolls, and it commented:

> The treaty of Paris, negotiated in 1783; the treaty with Spain negotiated in 1795; the ordinance of 1787, and many subsequent acts of Congress, provide for the absolute freedom of the Mississippi River and its tributaries, and dedicate them to the world as great national highways, to be kept forever free from any toll, tax, or duty of any kind whatever ..... These various treaties, reports, acts, and official declarations clearly indicate that for nearly half a century it has been the desire and intent of the government to secure the free navigation of the Ohio at this point.[17]

On May 18, 1880, Congress directed that no further tolls be collected at the Louisville canal after midnight, July 1, 1880, and that operation and maintenance costs were to be paid from Treasury funds. Strange to say, there was little public reaction to the final end to tolls. Will S. Hays, the wit, balladeer — author of many familiar lyrics, such as those of "Dixie" — and river news reporter for the *Courier-Journal*, probably summed up the reaction of rivermen: "Now as the canal is free, why can not wharfage be made free? There is no reasonable excuse in the world why the wharfage should not be free. Steamboats should at least have the same free privileges that our 'big-hearted city' gives to railroads."[18]

The steamboatmen had moved from the canal tolls to other increasing problems, and General Weitzel also had new problems. He wrote in confidence to a friend in early 1881:

> The way of lawyers are truly wonderful. Congress passes a law and the President signs it saying that the canal at Louisville shall be operated and

kept in repair by making monthly drafts on the Treasury.

The First Comptroller of the Treasury, after thinking over the matter about six months, says that the law makes no appropriation for operating or keeping the canal in repair. The same law directs the Canal to be free after midnight July 1, 1880.

If this decision of the First Comptroller stands as sound, and Congress does not correct the matter, I am personally liable for the whole $17933.22 which I have so far expended.

The wisdom of some of our Solons passeth my understanding.[19]

Congress, however, did not leave General Weitzel out on the proverbial limb. It provided funding arrangements in the Rivers and Harbors Act of 1881 for continued operation of the canal.

Canal Administration

At completion of the canal enlargement project in 1872 General Weitzel had been ordered to Michigan to direct a similar project at the St. Mary's Falls Canal, but he retained overall responsibility for the Louisville canal, with a deputy, Captain Milton B. Adams, Corps of Engineers, in immediate charge. Weitzel recommended in 1873 that when the United States took over operation of the Louisville canal, "the persons should all be employed during good behavior, for it will work serious if not fatal injury to the best interests of commerce if experienced men are not continually employed on the work especially in opening and closing these enormous gates." He was given authority to appoint the Louisville canal staff in 1874, and he retained most of the company personnel previously employed and selected his assistant, Colonel Philip J. Schopp, as superintendent. Captain Adams, deputy to General Weitzel at the canal, was relieved by Captain Alexander Mackenzie (later Major General and Chief of Engineers, 1905-1908) at the end of July, 1874; Captain Mackenzie had immediate charge of the canal until November 22, 1877, when relieved by Captain A. Nesbitt Lee, who died of a stroke at the project on October 31, 1879. Because no junior officer was then available for assignment, Superintendent Philip J. Schopp was assigned full responsibility for the canal under General Weitzel's orders.[20]

Dam at the Falls

In his report on the improvement of the Falls of the Ohio in 1868, General Weitzel recommended construction of a dam across the Falls to increase the depth of Louisville harbor three feet, prevent boats from wrecking on the Falls when seeking to enter the canal, increase water depth in the canal, and, through an opening in the dam at the head of Indiana Chute, increase the navigable depth for traffic passing over the Falls instead of through the canal. A timber-crib, stone-filled dam — that is, large timber boxes, similar in construction to a log-cabin, securely bolted at the corners and filled with irregular run-of-the-quarry stones — was authorized and placed under construction in 1868. In 1870 an apron dam, running north from the entrance of the canal and serving as a guide wall, was complete and about a third of the cross-river dam was in place. But construction was constantly interrupted by high water and runaway barges. For example, a barge rammed the cofferdam protecting the work area in 1875, destroyed a hundred feet of the coffer and flooded the work. By the time the cofferdam was repaired the river was rising and no further work could be undertaken until the following year.[21]

The cross-river dam was completed in 1881; 2,532 feet long from the head of the canal to the Indiana Chute and 210 feet from the Indiana Chute to the bank on the

Indiana side. Rock was blasted from the Indiana Chute to facilitate navigation and plans were instituted to install a movable metal Boulé navigable pass to close the Chute at low water and collapse against the bottom of the river at high-water to permit open-channel navigation. Numerous modifications, as experience indicated, were made in the dam across the Falls until the early twentieth century, when planning to construct a new dam at the Falls as part of the Ohio River Canalization project (it became Dam No. 41) was initiated.[22]

Canal Operation

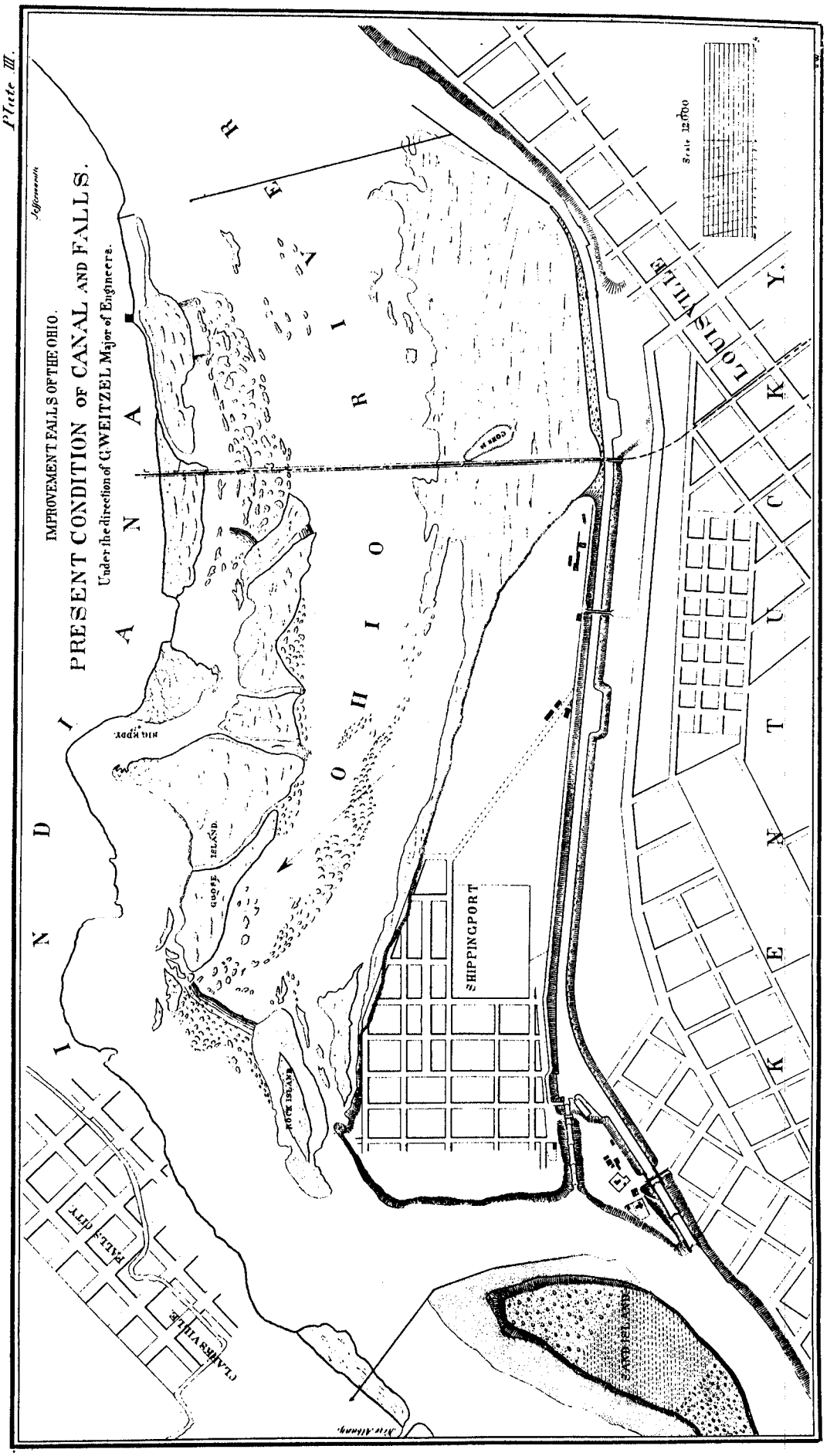
In 1874 the Louisville project consisted of a canal about two miles long and eighty-five feet wide, with two basins for boats to pass when in the canal. It had two sets of locks in two different outlets at the lower end of the canal. In addition, a dam was under construction across the crest of the Falls to provide better navigation through the Indiana Chute. The old lock, completed in 1830, was a three-flight structure, with an eight and two-third foot lift in each of the three chambers; and the new lock, completed in 1872, was two-flight, with a fourteen-foot lift in one chamber and twelve in the other. Because the locks were built in flights, like stairsteps, without intermediary basins, each boat has to pass through the entire series of three or two chambers before another could enter, and navigation, consequently, suffered many delays. General Weitzel said in 1879:

> The chambers of the new locks of the Louisville and Portland canal are 372 feet long and 80 feet wide. There are two lifts of 14 and 12 feet. The gates are very heavy. One leaf of the middle gates weighs over 90 tons. The machinery for operating the gates is worked by hand. Yet we have made 29 lockages in 21¼ hours.[23]

Lockhands at the Louisville canal necessarily had strong legs and backs, for the gates were opened and closed by turning capstans attached to the gates by chains. Lockhands seized handles extending from the capstans and walked and pushed in circles to wind the chains on the capstans. In 1876 they opened and closed the gates 8,406 times for 1,401 lockages. In turning the capstans and walking from gate to gate, each lockman walked about 2,604.85 miles during the year, or an average of 7.14 miles per day. It required five hours, forty-five minutes to pass the steamboat *Sam Brown* and its tow of sixteen coal barges through in six sections on December 3, 1875. On May 27, 1876, the lock force moved four steamboats and forty-six barges transporting 800,000 bushels of coal through the locks, which was just about the peak of human capability. As many as five coal tows with up to twenty barges each were frequently waiting at the canal for lockage, and problems naturally ensued.[24]

Each steamboat captain was, or at least thought he was, the king of the river; races to the canal were common, brawls were frequent, and the lockmen often bore the brunt of much ill-humor. In what was a vast understatement of the facts, Captain A. N. Lee officially reported in 1878 the work of the lock force was "often rendered very difficult by the conflicting interests and opinions of steamboat-men, some of whom have, during the past year as well as during previous years, ever been ready to find fault and condemn without reason, when the decision or order of the superintendent was not in accordance with their individual opinions and for their special benefit."[25]

Several measures were taken to mechanize lock operation, and attention was given to other plans for expediting



1872 Map of the Louisville and Portland Canal and Locks

movement of the burgeoning coal traffic through the canal. A telegraph line, later replaced by telephone, was installed in 1876 between the head of the canal and the locks to permit better management of traffic entering the canal. General Weitzel first suggested purchasing horses to replace the men turning the capstans, but finally installed steam engines to turn the capstans with compressed air. The engines reduced the time required to open the lock gate to three and a half minutes, whereas manual operation had required up to twenty minutes; they also reduced operating costs by reducing the number of personnel necessary for operation.[26]

To further speed lockage through the canal, the old three-flight lock was converted in 1880 to a two-flight system, with each chamber 50 feet wide and 300 feet long. But by 1896 few vessels passing through the canal were small enough to use the old lock system, and a movable bear-trap dam was placed across the upper chamber to flush the canal of mud deposits and debris, thereby lowering dredging costs. In 1914, when Lock and Dam No. 41 was under construction at the Falls, as part of the Ohio River slackwater project, the lock completed by the Louisville and Portland Canal Company in 1830 was filled and its site was covered with earth to provide space for office, power plant, and workshop facilities. The lock completed in 1872, however, was partially preserved throughout all subsequent project modifications, and the fine masonry used in its construction could still be viewed at McAlpine Locks and Dam in 1975.[27]

Canal Politics, 1880-1911

It could be argued that establishment of the Louisville Engineer District, separate from all other districts, resulted chiefly from the demand of Superintendent Philip J. Schopp that all employees at the canal earn their pay. At least, it is a fact that his desire to have the only hard-working personnel on the job precipitated a political imbroglio which caused the resignation of one District Engineer, the stationing of a District Engineer at Louisville with responsibility solely for the Louisville District, and the disruption of canal management for thirty years. The story of politics at the Louisville canal amply illustrates a problem which afflicted Engineer operations, and those of many other federal agencies, throughout the late years of the nineteenth century. The problem was part of a broad national situation during the era, involving the conflict between the political patronage, or "spoils" system, and civil service reform, a problem which reached the White House in 1881 with the assassination of President James Garfield by a disappointed office-seeker.

After the death of Captain A. N. Lee in 1879, Superintendent Philip J. Schopp had immediate charge of the Louisville canal under the general direction of General Weitzel, who spent his time chiefly at a canal construction project in Michigan. Because of ill-health, General Weitzel took leave in 1882, and from July 31, to September 18, 1882, the Louisville office was temporarily in charge of Major Francis U. Farquhar, and then transferred to Colonel William E. Merrill, Corps of Engineers, who had been in charge of the Cincinnati Engineer office since 1870. Throughout this period, no Engineer officer was stationed at Louisville and Mr. Schopp had local charge of operations.[28]

In the autumn of 1884, Schopp had a gang of laborers at work moving stone by wheelbarrow up a thirty-foot incline for placement in a crib-dam. Schopp could not be at the work site every moment, and,

after observing the amount of work completed in his absence, he concluded the laborers were loafing on the job. At his office, about a quarter-mile from the work-site, he picked up a field glass and found his suspicion was justified. Schopp lectured the men on their short-comings, told them they were "not earning their money," and threatened to discharge them. He did not fire them, but refused to rehire them during the next working season and thereby made several enemies who went to local politicains with their complaint and contacted an attorney.[29]

The Democratic administration of President Grover Cleveland took office in March, 1885, and, in June, O. H. Stratton, a Louisville attorney, brought charges against Schopp and others of the canal management, contending that all canal personnel had been Democrats in 1874, when the United States took it over, but all were Republican in 1885. Schopp was specifically charged with the "use of money, cigars and liquors at a coffee house, adjacent to said old locks to influence and corrupt voters at the election in 1878 to vote the republican ticket."[30]

The Chief of Engineers ordered an investigation, and Colonel Merrill held an inquiry at the Louisville office, with Congressman Albert S. Willis, Democrat of Louisville and also Chairman of the House Committee on Rivers and Harbors, present and O. H. Stratton acting as prosecutor. Accusations were made by the employees Schopp had refused to rehire, but Merrill discovered the election of 1878, referred to in the charges, was between two Democrats — Republicans were not involved — and one of the laborers who had been refused employment on "account of laziness" refused to corroborate the stories of the other laborers. Merrill exonerated Schopp and other canal employees of all charges.[31]

O. H. Stratton, the attorney, who also had hopes of finding employment as timekeeper on the project, engaged in vitriolic attacks on Merrill in local newspapers. One of his letters, for example, stated that Colonel Merrill "cracked his royal official whip over the heads of his superiors, and gloried in the spectacle that he had temporarily interred the reform movement .... Thus our distinguished army cuttle fish folded his paternal arms around the Ohio river improvements, and stood on the supposed reform debris, proudly waved the banner ... and shouted 'Big Injun, Me!' " Colonel Merrill insisted that no man should be appointed to a supervisory post at the Louisville canal who was not an experienced engineer. River news reporter Will S. Hays of the Louisville *Courier-Journal* commented:

> It is said that a man can't be Superintendent of the canal here unless he is a scientific, practical engineer. That's what's the matter with Ohio river improvements. Uncle Sam wants less "engineering" and more good, hard, horse, common sense, and he'll save money and have better improvements. A teaspoonful of common sense is sometimes worth a barrel of science.[32]

Political pressures in Washington increased, and in December, 1885, the Chief of Engineers ordered Colonel Merrill to forward a list of all canal employees showing their political affiliation. Merrill replied that of the personnel on duty at the canal, who had been on the job since the United States took over in 1874, three were Democrats and fourteen Republicans; of the twenty-five men employed after 1874, six were Democrats, eighteen Republican, and one independent. By early 1886 the word had gotten out that Schopp was to be dismissed, and Colonel Merrill and the Office of the Chief of Engineers were flooded with applications.

One interesting application came from a man who claimed he deserved the job because he was a Democrat and wanted the position because it "pays as well as drumming through Arkansas with two or three large trunks."[33]

A Louisville newspaper reported on February 3, 1886, that Superintendent Schopp had been fired and replaced by General Thomas Hart Taylor, a former Confederate officer who served as Louisville Chief of Police for eleven years, at the insistence of Kentucky Governor Simon B. Buckner, a Democrat and also a former Confederate General. Colonel Merrill was not informed of the Taylor appointment until after the news appeared in the paper. Merrill angrily wrote the Chief of Engineers that, although he knew General Taylor personally and liked him, Taylor was not an engineer and was not competent for the position:

> Inasmuch as the Department has ordered me to appoint as my chief assistant on this great work a gentleman whom I consider incompetent, and a due regard for my reputation as an Engineer, compels me to request that I be relieved from the charge of the Louisville and Portland Canal.[34]

A few days later, Colonel Merrill received an application from Mr. J. P. Claybrook for the position of assistant to General Taylor. Merrill advised Claybrook that if he wanted a job he should do as others had done and "get it through politicians." Claybrook accepted the good advice and got the position he wanted. Colonel Merrill was relieved from command of the Louisville office as requested on March 15, 1886, by Major Amos Stickney, but Merrill retained charge of the Cincinnati Engineer office and employed Schopp in that district. Whereas General Weitzel had charge of two waterways projects, the Louisville canal and the St. Mary's Falls canal, and Colonel Merrill concurrently directed the Louisville and Cincinnati offices, Major Stickney had charge only of the Louisville office and established his headquarters in downtown Louisville. He was still in charge at Louisville when Engineer Districts and Divisions were formally established in 1888, and technically was the first Louisville District Engineer.[35]

Congressman Albert Willis of Louisville continued to exert his political influence in Washington to get Democrats appointed to the Louisville canal. He wrote the Secretary of War in 1886, complaining that Major Stickney was just as obstinate as his predecessor about personnel changes at the canal and reminding the Secretary that "just prior to my departure from Washington you will recollect that the removal of offensive partisans from the Louisville and Portland Canal was determined upon and that it would be done on *your* return to Washington." It is not clear that this pressure had any great effect, however, on canal management.[36]

After the Republican administration of President Benjamin Harrison took office in 1889, Major Stickney decided to rid the canal of Superintendent Thomas H. Taylor, who, in the opinion of Stickney, had upset the entire canal work force by creating the impression that he would replace them with his friends. Stickney recommended dispensing with the positions of Canal Superintendent and Assistant Superintendent and substituting the positions of Master Lock Manager and Deputy Lock Manager. Holders of the two new positions would have only the duties of supervising canal operation, while all construction and other duties requiring engineering abilities would be performed by United States Assistant Engineers (a title used to refer to any civil engineer employed by the Corps). The Chief approved

this arrangement, Superintendent Taylor and his assistant resigned, William M. Ekin and J. A. Needy were appointed to the new positions; and U. S. Assistant Engineer Robert R. Jones took over construction and engineering functions at the canal and Assistant Engineer Granville W. Shaw was assigned responsibility for open-river improvements over the Falls.[37]

But the new arrangement did not work quite as well as Major Stickney had expected. Robert R. Jones, because he hired most temporary labor employed on the project, soon was attacked for "hiring democrats and ex-confederate soldiers to perform the work on said canal to the exclusion of ex-federal soldiers and republicans who have done good service for their party." A flood of petitions descended on the Republican President, Benjamin Harrison, and the War Department, claiming that Jones was a South Carolina Democrat, and that he and canal employees had torn down the campaign posters of Harrison and stamped on them, or merely daubed them with mud. One letter to the President baldly claimed that "To the victors, belong the spoils," and asserted:

> Mr. Cleveland appointed Gen'l Taylor, a rebel, as superintendent and no kick was made. Since Cleveland left office the same crowd has been running the canal. All the leaders of the Republican party in Louisville, New Albany and Jeffersonville want Mr. Jones removed.[38]

The District Engineer investigated and reported that R. R. Jones was a New Jersey Republican, that only a few canal employees were Democrats, and suggested, doubtless with tongue-in-cheek, that these employees ought to be left on the job where they might be converted by the Republican majority. He complained to the Chief that politics was interfering with more important duties and represented efforts of local politicians to secure control of appointments at the canal. But the Secretary of War ordered the dismissal of R. R. Jones and William Ekin, the Lock Manager, and the employment of Hart Vance and Josephus W. Pell, both "good" Republicans. Colonel Merrill employed Jones in the Cincinnati District, and Jones had immediate charge of the Ohio River slackwater survey of 1911-1914 and became Cincinnati District Engineer in 1917. He wrote many valuable accounts of the early history of the Ohio Valley and early waterways projects in the region.[39]

At the appointment of Vance and Pell, the District Engineer at Louisville tendered his resignation because of their "highly prejucicial" character, but it was not accepted. In 1892, however, there was another election and another change in the national administration. Democrat Grover Cleveland again took office, and the District Engineer removed Hart Vance and J. W. Pell and did not refill their positions; instead, he arranged the appointment of Lieutenant Hiram M. Chittenden, Corps of Engineers, as his deputy and assigned the previous duties of Vance and Pell to the Lieutenant. The new administration was flooded with petitions from navigation interests in the Ohio Valley requesting that the Louisville canal be placed under civil service laws to prevent the appointment of incompetents for political reasons. This was done in 1896, but before it was accomplished a good Democrat, Eugene M. Terry, was appointed Master Lock Manager.[40]

The Master Lock Manager had occupied a government-owned house at the canal prior to 1893, when Lieutenant Hiram M. Chittenden moved into it. Mr. Terry, the new Lock Manager demanded occupany of the house as part of his compensation, and the Secretary of War ordered Lieutenant Chittenden, by then the

District Engineer, to vacate the premises for the use of Mr. Terry. Chittenden sought and received reassignment. He surveyed a canal in Ohio, then went west to direct projects on the Upper Missouri River and administer the development of Yellowstone National Park; he became an unusually prolific author and historian and became the Corps' earliest proponent of federal flood control projects and multipurpose water resource development.[41]

Politics continued as usual at the Louisville canal. In 1897 the Republican administration of President William McKinley succeeded the second Cleveland administration, and Mr. Terry, Democrat, went the way of all previous Lock Managers. The Republican administration agreed to the abolition of the positions of Master and Deputy Lock Manager, but arranged the reappointment of Josephus W. Pell, Republican leader of the Louisville post of the Grand Army of the Republic (Union Civil War veteran organization), to the canal as Assistant Traffic Manager (there was no Traffic Manager) in 1897. Civil service regulations had been extended to canal personnel in 1896, and under these laws Mr. Pell remained at his post until his retirement in 1920.[42]

Political efforts to control patronage at the Louisville canal persisted throughout the first decade of the twentieth century, and the standard rule was that the Louisville District Engineer first cleared any change in canal staff with the Secretary of War. Operations at the canal during that period were directed chiefly by Assistant Engineers J. H. Casey and Granville W. Shaw. There were several efforts to obtain their removal but none were successful.[43]

In 1911 Senator William Bradley of Kentucky, a former Governor of the state, sought to arrange an appointment at the canal of a new Master Lock Manager; there had been none for over a decade. The District Engineer and the Chief of Engineers made a complete report on the long history of politics at the canal, explained that the position of Master Lock Manager had been a "source of constant trouble and contention from the time of its creation," and carried high pay for nominal services. Reestablishment of the position was, in their opinion, unnecessary and would "upset the present good organization and invite a return of former troubles."[44]

President William H. Taft, a former Secretary of War with intimate knowledge of the problems created by the patronage system, read the lengthy report and returned it with a notation for the attention of the Secretary of War:

> Don't worry about the master lock manager, I am not going to reestablish an office like that.[45]

Summary

The tax on commerce charged by the canal company prior to 1874 was indeed onerous, but the canal corporation was free of the influences of local politics. The conversion of the Louisville canal to a federal project in 1874 subjected the management of the canal to patronage politics at its very worst — politics so rife that it seriously interfered with proper administration and operation of the project. Patronage problems were common on many Engineer projects during the last quarter of the nineteenth century. The extension of civil service regulations to the Louisville canal, as to other Engineer installations, was beneficial both to Engineer personnel and to the proper administration of waterways projects.

Politics ideally expresses the will of the sovereign of the United States — its citizens — and the modern Corps of En-

gineers takes considerable pride in its responsiveness to the needs of Americans, as expressed at open public hearings and through elected representatives. Major General Lytle Brown, Chief of Engineers, 1929-1933, who had been Louisville District Engineer when President Taft finally closed the book on patronage at the Louisville canal, summarized the Engineers' position on the subject of politics in 1935:

> It may be said with equal truth that politics may further the adoption of a project, and may prevent it. Furthermore, as may be claimed without disturbing the equanimity of a citizen or his faith in his government, politics is involved in everything that affects the welfare of the people of the Republic. Otherwise there would be no democratic principle in government.[46]

But the story of the struggle of the early District Engineers with patronage politics should not obscure the major developments at the canal during that era. Though the passenger-freight business of the steamboat packets, for which the canal was originally designed, dwindled during the last quarter of the nineteenth century, use of the river as a medium for economical transportation of bulky, low-value industrial materials was increasing, and the barge-towing system placed new burdens on the Louisville canal. Through continued mechanization and modification of the canal project, the early Louisville District Engineers and their staffs accomplished sbstantial improvement in handling the new traffic, in spite of meager funding policies and rampant political interference.